

FAUNISTIC NOTE

First record of *Colobopsis truncata* (Hymenoptera: Formicidae) from Moldova region of Romania

Ioan Tăușan¹, Alexandru Pintilioaie², Dana Milea³, Mihai Zachi³, Silviu Țicu¹

¹ Lucian Blaga University of Sibiu, Faculty of Sciences, Applied Ecology Research Center, Romania

² Research Group in Invertebrate Diversity and Phylogenetics, Faculty of Biology, "Alexandru Ioan Cuza" University of Iași, Romania

³ 'Ion Mincu' University of Architecture and Urban Planning, School of Urban Planning, Bucharest, Romania

Corresponding author: Ioan Tăușan (ioan.tausan@ulbsibiu.ro)

Received 4 November 2020 | Accepted 14 December 2020 | Published 31 December 2020

Citation: Tăușan I, Pintilioaie A, Milea D, Zachi M, Țicu S (2020) First record of *Colobopsis truncata* (Hymenoptera: Formicidae) from Moldova region of Romania. Travaux du Muséum National d'Histoire Naturelle "Grigore Antipa" 63(2): 169–173. <https://doi.org/10.3897/travaux.63.e60375>

Abstract

Colobopsis truncata is a common Mediterranean species distributed mostly in southern and central Europe. In Romania, the species is expected to be widely distributed, but data are scarce. Both minor workers and soldiers of the species were collected in different sites during field observations in the spring of 2020. Herein we report the first record of *Colobopsis truncata* from Moldova and new records for southern Romania.

Keywords

citizen science, public parks, faunistics, new records.

The Romanian ant fauna has reached an official 113 species (Tăușan and Lapeva-Gjonova 2017; Wagner et al. 2018; Steiner et al. 2018). Yet, the current knowledge is not uniformly spread along the country. Regions such as Moldova, Banat and Muntenia are poorly known or understudied in terms of species composition (Markó et al. 2006).

Among the ant genera, *Camponotus* Mayr, 1861 is represented in Romania by at least 12 species (Markó et al. 2009; Tăușan and Lapeva-Gjonova 2017). More

recent, Ward et al. (2015) elevated the formerly subgenus *Colobopsis* Mayr, 1861, from the *Camponotus* genera, to a separated genus. Moreover, according to Ward et al. (2016), *Colobopsis* comprised 122 species occurring “in the New World from southern United States to Costa Rica; across the southern and central Palearctic from the western Mediterranean to Japan; throughout the Oriental and Australian biogeographic regions as far south as Tasmania; and into the Pacific as far east as New Caledonia, Vanuatu, and Fiji”. However, the genus was not recorded from the Afrotropics and most of the Neotropics (Ward et al. 2016). Among these species, *Colobopsis truncata* (Spinola, 1808) is the only one that can be found in Europe.

Colobopsis truncata is a Mediterranean species, distributed mostly in southern and central Europe and in the southern part of eastern Europe. Moreover, the species is occurring in the east as far as Turkmenistan and in the south as far as Algeria (Rigato and Toni 2011).

In Romania, the species was recorded mainly in Transylvania (Markó et al. 2009) and, more recently, in Dobrogea (Tăușan 2017).

Regarding the morphological identification of this species, Ionescu-Hirsch (2009) characterizes *Colobopsis truncata* as small dimorphic ants with phragmotic individuals. The major workers (soldier cast) has a cylindrical, abruptly truncated head, thus preventing intruders from entering nests by blocking the entrances with their heads. This is the case also, for the queens (Fig. 1). Minor workers can be easily recognized due to their “rounded head and the straight frontal carina, antennal insertion close to the middle of the frontal carina, propodeum dorsum distinctly concave in lateral view, and by the petiole scale with acute summit in lateral view and indented dorsum in front view” (Ionescu-Hirsch 2009).

According to several myrmecologists, *C. truncata* is a thermophilous species occurring in xerothermous deciduous wood stands and also single trees in more open land such as orchards and light forests (Markó et al. 2009; Seifert 2018). It nests in dead parts of living trees, mainly in dry thin branches of a wide spectrum of broad-leaved trees, exhibiting preferences towards inhabiting *Quercus* sp. L., *Juglans* sp. L. and *Prunus avium* L. (Czechowski et al. 2012; Seifert 2018).

We collected workers of *C. truncata* in three new very different locations within Romania. Namely, we collected both minor, major workers and wingless queens from *Juglans* sp. branches in a rural area from Oltenia region (Costești – Vâlcea County). Moreover, we collected minor workers from Herestrău Park, Bucharest, making this finding the second record of the species from Muntenia region. Finally, we sampled minor and major workers from a garden in Comănești (Bacău County), being the first record for Moldova region (Fig. 2).

Our data suggests that *C. truncata* might be widespread throughout the country, yet more records of the species are needed.

Via citizen science, distribution knowledge regarding ant species could be increased, especially in the case of the more easily identifiable ones occurring in habitats with easy access (e.g. parks, urban forests).

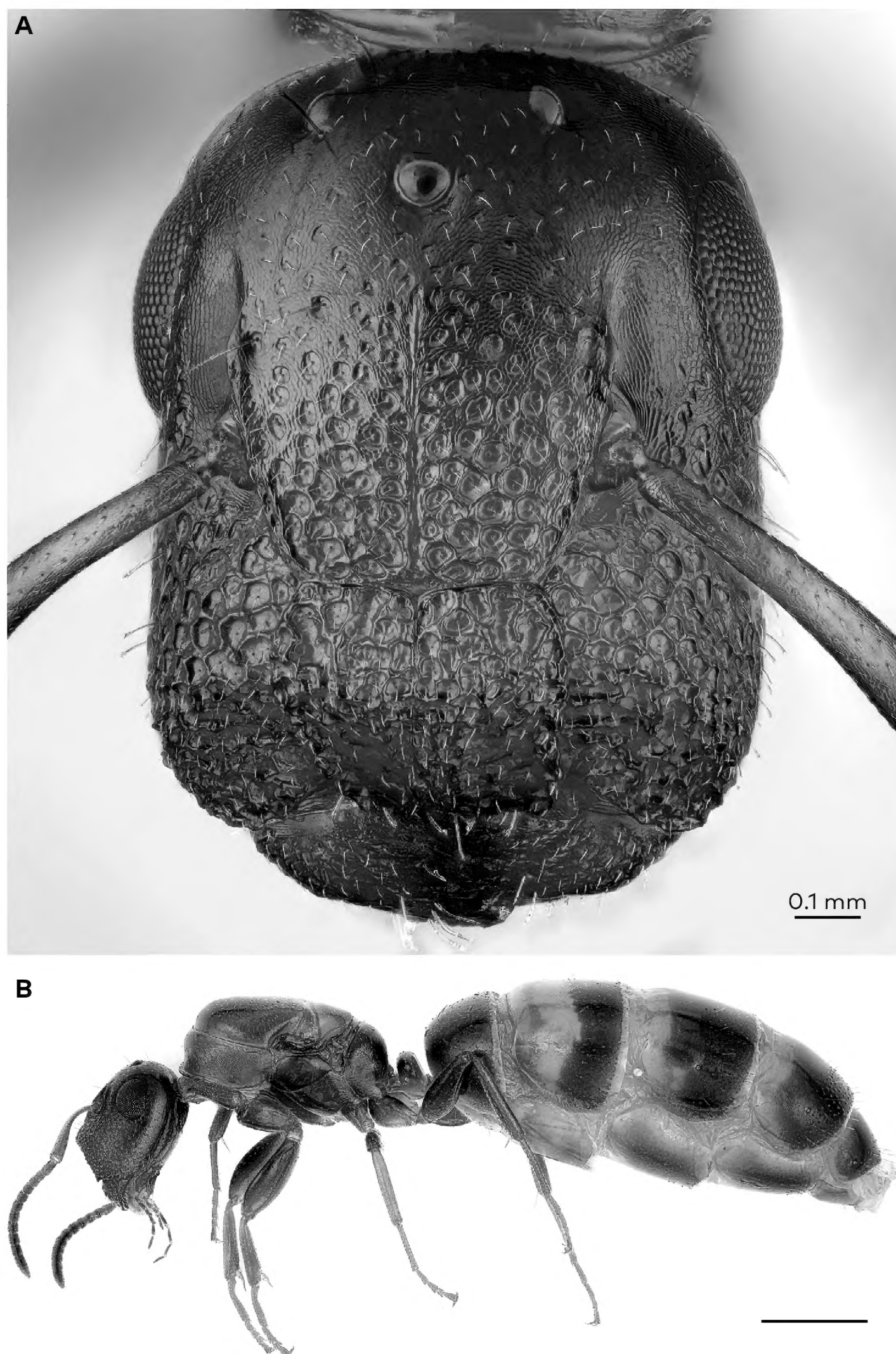


Figure 1. *Colobopsis truncata* queen: A – frontal view; B – lateral view (photo credit: Maximilian Teodorescu)

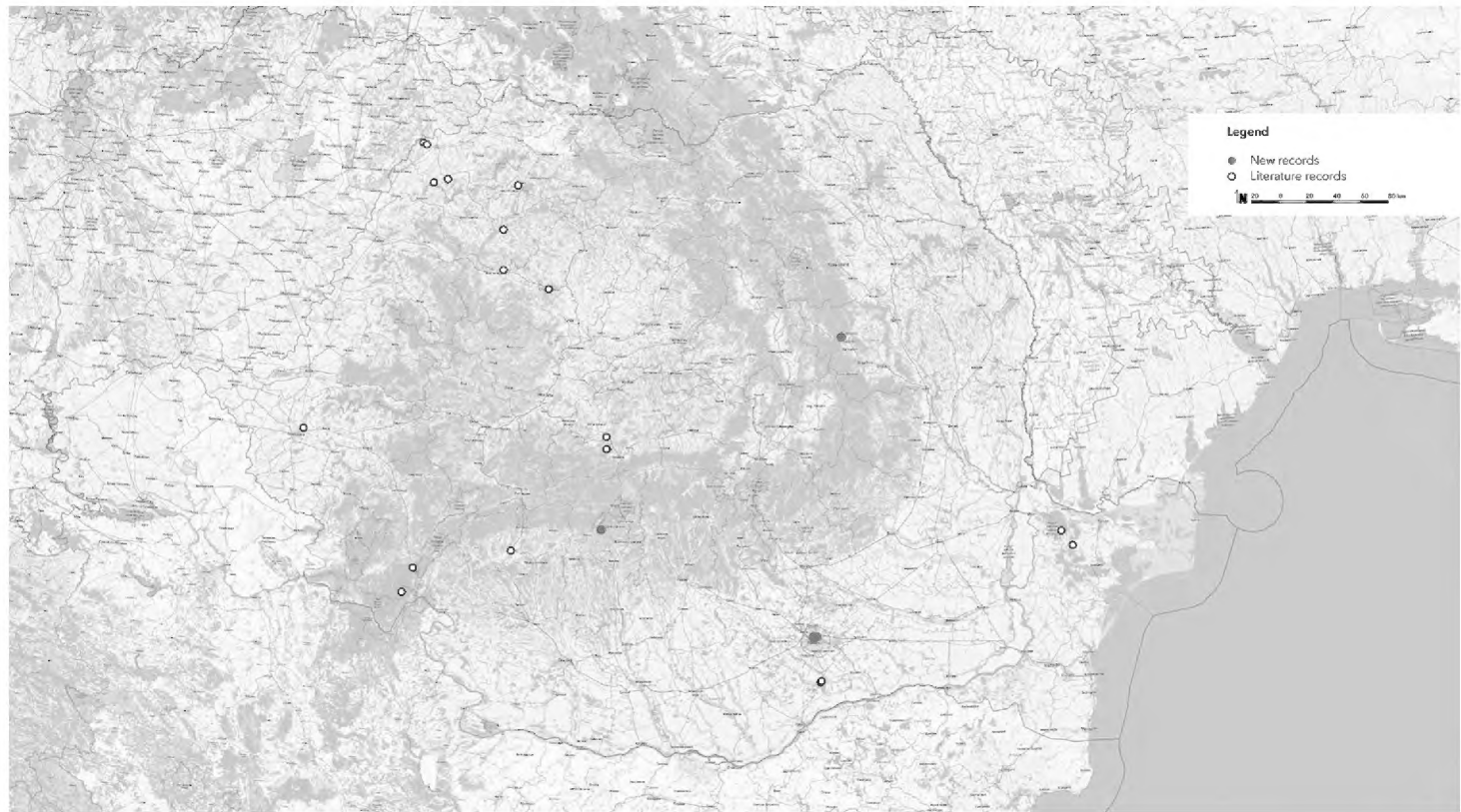


Figure 2. Known distribution of *Colobopsis truncata* in Romania

Acknowledgements

The authors are grateful to Maximilian Teodorescu for the photos of *Colobopsis truncata* queen. We kindly thank two anonymous reviewers for their careful reading of our manuscript and their many insightful comments and suggestions.

References

- Czechowski W, Radchenko A, Czechowska W, Vepsäläinen K (2012) The ants of Poland with reference to the myrmecofauna of Europe. Natura optima dux Foundation, Warsaw, 496 pp.
- Ionescu-Hirsch A (2009) An annotated list of *Camponotus* of Israel, with a key and descriptions of new species. Israel Journal of Entomology 39: 57–98.
- Markó B, Sipos B, Csősz S, Kiss K, Boros I, Gallé L (2006) A comprehensive list of the ants of Romania (Hymenoptera: Formicidae). Myrmecological News 9: 65–76
- Markó B, Ionescu-Hirsch A, Szász-Len A (2009) Genus *Camponotus* Mayr, 1861 (Hymenoptera: Formicidae) in Romania: distribution and identification key to the worker caste. Entomologica Romanica 14: 29–41.
- Rigato F, Toni I (2011) Short notes 21. Hymenoptera, Formicidae. Research in the framework of the ICP Forests network. Conservazione Habitat Invertebrati 5: 873–882.
- Seifert B (2018) The ants of Central and North Europe. Lutra Verlags- und Vertriebsgesellschaft, Tauer, 408 pp.

- Steiner FM, Csősz S, Markó B, Gamisch A, Rinnhofer L, Folterbauer C, Hammerle S, Stauffer C, Arthofer W, Schlick-Steiner BC (2018) Turning one into five: integrative taxonomy uncovers complex evolution of cryptic species in the harvester ant *Messor* “*structor*”. *Molecular phylogenetics and evolution* 127: 387–404.
- Tăușan I (2017) *Colobopsis truncata* (Spinola, 1808) (Hymenoptera: Formicidae) in Romania, with the first record from Dobrogea. *Acta Musei Brukenthal* 12(3): 507–512.
- Tăușan I, Lapeva-Gjonova A (2017) *Camponotus samius* Forel, 1889 (Hymenoptera: Formicidae)–at the north. *North-Western Journal of Zoology* 13(2): 352–354.
- Wagner HC, Gamisch A, Arthofer W, Moder K, Steiner FM, Schlick-Steiner BC (2018) Evolution of morphological crypsis in the *Tetramorium caespitum* ant species complex (Hymenoptera: Formicidae). *Scientific reports* 8(1): 1–10.
- Ward PS, Blaimer BB, Fisher BL (2016) A revised phylogenetic classification of the ant subfamily Formicinae (Hymenoptera: Formicidae), with resurrection of the genera *Colobopsis* and *Dinomyrmex*. *Zootaxa* 4072 (3): 343–357. doi:10.11646/zootaxa.4072.3.4
- Ward PS, Brady SG, Fisher BL, Schultz TR (2015) The evolution of myrmicine ants: phylogeny and biogeography of a hyperdiverse ant clade (Hymenoptera: Formicidae). *Systematic Entomology* 40: 61–81. <http://dx.doi.org/10.1111/syen.12090>.